Consumer and Corporate Affairs Canada | Consommation et Corporations Canada

(11) (A) No. 1 237 624

(45) ISSUED 880607

(52) CLASS 135-10
C.R. CL. 135-15

(51) INT. CL.[4] E04H 15/00

(19) (CA) **CANADIAN PATENT** (12)

(54) Portable Shelter or Tent Enclosure, Structures and Components Therefor

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(21) APPLICATION No. 470,968

(22) FILED 841221

No. OF CLAIMS 34

Canada

DISTRIBUTED BY THE PATENT OFFICE, OTTAWA
CCA-274 (11-82)

ABSTRACT

This invention relates to a portable shelter or tent enclosure having a self supporting frame structure that may be pivotally erected and collapsed for supporting a fabric cover. The frame comprises at least three substantially U-shaped frame members which are linked at the ends of each of the parallel side arms remote the top of the U at about a common point. At least two of the three frame members are braceable in an angularly spaced apart position by segments comprising a pair of laterally braced parallelograms pivotally linked to the pairs of side arms. The frame structure can support a removeably secureable horizontal frame brace that is easily connected to and removed from the top of the laterally braced parallelogram of the frame and includes arms extending angularly downwardly to the side from the brace to the parallel side arms forming the base of the laterally braced parallelogram thereby providing an effective lateral brace to the frame.

FIELD OF INVENTION

This invention relates to an improved portable shelter tent enclosure, structures and components therefor.

BACKGROUND OF INVENTION

Tents in use throughout the world, may comprise an underlying or surrounding frame to shape or support a canvas or fabric shelter. In one aspect the shelter of canvas or fabric is supported by underlying poles and stretched by cords secured to pegs driven into the ground; or, the underlying support may comprise a self-supporting framework around which the canvas or fabric is secured. In another aspect, the self-supporting framework may surround and suspend the canvas or fabric shelter. Existing tents require some degree of assembly of the constituent elements comprising the self-supporting framework or some degree of assembly in erecting the combination of fabric supported by underlying poles and stretched by cords secured to pegs driven into the ground. Until my invention, the assembly required has been time consuming and is not advantageous where a portable shelter is required which may be erected in a matter of seconds without requiring any assembly of its constituent elements. This is so, for example, in the case of field repairs by utility companies in environments where either the worker or the equipment must be protected from the elements by the migration of dust, corrosive contaminants, rain or snow etcetera...; or, for example, where a hunting blind is usefully employed when it may be quickly and inconspicuously set up.

It is, therefore, an object of this invention to provide an improved portable shelter or tent enclosure

which overcomes the deficiencies of prior art. Further and other objects of the invention will be realized by those skilled in the art from the following summary of the invention and detailed description of preferred embodiments thereof.

SUMMARY OF INVENTION

This invention relates to a portable shelter or tent enclosure having a self supporting frame structure that may be pivotally erected and collapsed for supporting a fabric cover. The frame structure has a seat that is easily connected to and removed from the frame structure of the shelter which provides an effective lateral brace when connected to the frame. The portable shelter comprises collapsible self-supporting frame, the shape of the frame when pivotally erected, defined by at least three substantially U-shaped frame members, each frame member having a pair of parallel side arms spaced from each other at the same end by a top arm sufficient to form a substantially U-shape, the top arm at either end carrying a channel in which one end of each side arms is pivotally linked sufficient to permit each side arm to be positioned at a substantially right angle to the top arm and to pivot to a position substantially parallel and adjacent to the top arm; the at least three substantially U-shaped frame members pivotally linked so as to define at least three planes, the at least three side arms spaced on each side of the at least three top arms, at their ends remote the top arm pivotally linked in at least two parallel spaced apart vertical channels, each channel providing at least two vertically spaced pivot points in which the end portions of the at least two side

arms are vertically spaced and pivotally linked to each vertical channel, sufficient to permit the at least three substantially U-shaped frame members defining at least three planes to be spaceable from each other extending pivotally from common pivot points provided by the at least two parallel spaced apart vertical channels so as to provide a frame when pivotally erected having three frame members angularly spaced from a common line of pivot, the angularly spaced frame member comprising a first horizontal frame member, a third vertical frame member, and a second intermediate frame member angularly spaced between the first and third frame member; the at least three angularly spaced frame members when pivotally erected, releaseably locked in spaced relationship by a releaseable locking means comprising a horizontal locking segment pivotally attached to the vertical side arm of the third vertical frame member at a point spaced from the ends thereof, a vertical locking segment pivotally attached to the horizontal side arm of the first horizontal frame member at a point spaced from the ends thereof, the horizontal locking segment carrying a vertically extending channel in which the end of the vertical locking segment is pivotally linked, at substantially a right angle when the frame is erected, a diagonal locking segment composed of two pivotally attached subsegments connected one to the other by an intermediate channel-shaped locking bar providing at least two spaced pivot points, extending downwardly at substantially 45 degrees when the frame is erected between the vertical and horizontal locking segment so as to lock the position of the vertical locking segment at a substantially right angle to the horizontal

locking segment, the said releaseable locking means carried on both sides of the frame; and the frame further supported in spaced relationship by a removeably secureable horizontal seat extending between and surmounting the horizontal locking segments, the seat carrying two lateral support arms each for extending between the seat and the side arms of the horizontal frame member so as to substantially stabilize the lateral stability of the frame.

In one embodiment of the invention, preferably the frame is constructed of aluminum.

According to another aspect of the invention, a canvas or fabric cover surrounds and is secured to the frame. In one embodiment of the invention, the cover when used in combination with the frame, is suitable for use as a portable hunting blind, providing a plurality of flaps, screens and windows suitable for camouflaging, comprising a front flap door spaced between the arms of the third vertical frame member, a plurality of apertures comprising windows, screens or flaps on the side, back or top of the hunting blind spaced between the angularly spaced side or top arms of the frame members.

Preferably, the screens comprise a fine webbing sewn into an aperture in the cover and are constructed of at least two overlapping pieces of webbing to provide slits which may be ideally spread apart by hand pressure or pressure from the muzzel of a firearm. Preferably, fabric flaps overlie the screens to make the aperture waterproof and may be rolled up to expose the screens.

According to another embodiment of the invention, the flaps may be secured in an opened or closed position

by means of a zipper connected to the cover, or by means of fabric ties.

In another embodiment of the invention, the cover, when used in combination with the frame, is suitable for use in effecting electrical or telephone field repairs, particularly in the case of electrical components including integrated circuits or switches, fibre optics, cables, or digital equipment where the equipment must be worked upon in a protected environment in order to be kept clean. According to this embodiment, a plurality of zippers, flaps, collars and the like are provided sufficiently that the portable tent enclosure may be erected so as to directly enclose the equipment or surround the equipment comprising a substantially horizontally placed zipper extending around the sides and back of the shelter so as to receive and enclose a cable passing longitudinally through the portable tent enclosure; and, further comprising a plurality of flaps extending from the top and sides of the portable tent enclosure proximate the third vertical frame member, the top flap providing at least one vertically extending collar sufficient to surround at least one vertically extending pole proximate its base and thereby form an enclosure about a pole. According to this embodiment of the invention, a pole carrying integrated circuits or switches or digital equipment in a box proximate its base may be enclosed to provide a controlled environment that will not expose the equipment to dust, corrosive contaminants, rain or snow etcetera.

It will be appreciated that the erected shelter may be collapsed to a portable position by removing the

horizontal seat releasing the locking means, pivotally placing the third and second frame members in a horizontal position parallel the first horizontal frame member, and pivoting the side arms of each frame member inwardly to a position substantially parallel and adjacent to the corresponding top arm of each frame member. The canvas or fabric cover attached to the frame members substantially conforms to the dimensions of the collapsed frame.

Preferably the cover is secured to the frame by means of loops passing around the frame members or, may be secured by means of bolts or pins passing through the cover and secured to the frame members.

The invention will now be illustrated with reference to the drawings of an embodiment of the invention.

DESCRIPTION OF DRAWINGS

Figure 1 is a perspective view of a portable shelter in one embodiment of the invention.

Figure 2 is a perspective view of a pivotally collapsible self-supporting frame for the portable shelter shown in Figures 1, 10 and 14, shown in erected position.

Figure 2A is a top perspective partially exploded view of part of the seat shown in part of Figure 2.

Figure 2B is a lower perspective view of the seat shown in Figures 2, 2A, 2C, and 2D depicting unextended lateral support arms.

Figure 2C is a lower perspective view of the seat shown in Figure 2B, depicting extended lateral support arms.

Figure 2D is a side view taken along lines 2-2 (in Figure 2) of a seat and frame depicting the seat laterally

supporting the elements of the frame in spaced relationship.

Figure 3 is a close-up perspective partially cut away view of a pivotal joint for the frame shown in Figures 2, 7, 8 and 9, shown variably in an erected and a collapsed position.

Figure 4 is a side view of the joint shown in Figure 3, shown in an erected position.

Figure 5 is a close-up perspective partially cut away view of a joint providing three vertically spaced pivot points for the frame shown in Figures 2, 7, 8 and 9, shown in an erected position.

Figure 6 is a view of the joint shown in Figure 5, shown in a collapsed position.

Figure 7 is a perspective view of the frame shown in Figure 2, shown in a partially collapsed position.

Figure 8 is a perspective view of the frame shown in Figure 2, shown in a partially collapsed position.

Figure 9 is a perspective view of the frame shown in Figures 2, 7 and 8, in a fully collapsed position.

Figure 10 is a perspective view of one embodiment of the portable shelter.

Figure 11 is a top view of the front screen and flap system shown in Figure 10.

Figure 12 is a perspective view shown from the inside of the portable shelter of the front screen and flap system shown in Figures 10 and 11.

Figure 13 is a top view of the side screen and flap system shown in Figure 10.

Figure 14 is a perspective view of one embodiment of the portable shelter, surrounding a cable or pole.

Figure 15 is a close-up perspective partially cut away view of a portion of the portable shelter shown in Figure 14 surrounding a cable.

DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

With reference to Figure 1, a portable shelter or tent enclosure 22 is shown comprising a pivotally collapsible self-supporting frame 24 (best shown in Figure 2) secured to a surrounding canvas or fabric cover 26.

With reference to Figure 2, the frame 24, when pivotally erected is shown comprising a first horizontal frame member 28, a second intermediate frame member 30, and a third vertical frame member 32. Frame members 28, 30, and 32 each comprise a pair of parallel side arms 34, 36 and 38, spaced from each other by a top arm 40, 42 and 44 respectively. The top arm 40, 42 and 44 extending horizontally is curved at both ends to carry two vertically oriented pivotal joints 46 (best shown in Figures 3 and 4), pivotally linking side arms 34, 36, 38 and top arms 40, 42, 44 respectively.

With reference to Figure 3, pivotal joint 46 is U-shaped and comprises a vertically oriented channel 48 opening inwardly towards top arms 40, 42, 44 receiving side arms 34, 36, 38 respectively and pivotally linked to side arms 34, 36, 38 by pin 50 passing through side wall 52, 54 of channel 48 and side arm 34, 36, 38.

Channel 48 at end opposite pin 50 receives vertically oriented segment 56 of top arm 40, 42, 44 and is permanently secured thereto preferably by means of a weld 58.

Side arm 34, 36, 38 may thereby extend from an erected 60 to a collapsed 62 position.

With reference to Figure 4, it will be appreciated

With reference to Figure 4, it will be appreciated from a top view of the pivotal joint 46 that pin 50 is spaced from the end 64 of channel 48 sufficient to permit the back 66 of channel 48 to prevent side arm 34, 36, 38 from opening beyond erected position 60.

With reference to Figures 2, 5 and 6, a frame member pivot joint 68 is provided. Pivot joint 68 stands upright and comprises a vertically oriented channel 70 (best shown in Figure 6) opening towards frame members 28, 30 and 32 and receiving vertically spaced ends of side arms 34, 36, 38; channel 70 carrying a plurality of at least two vertically spaced apertures 72, 74, 76 (one of which is shown at 72) through both of side walls 78, 80 defining the lateral extent of channel 70, whereby side arms 34, 36, 38 are pivotally linked to side walls 78, 80 of channel 70 by pin 74A, 76A, passing through side walls 78, 80 and side arms 36, 38. Preferably, the end of side arm 34 of horizontal frame member 28 is secured inside base 82 of vertically oriented channel 70 by weld 84 and does not require a pin as seen with reference to side arms 36, 38 pivotally secured by pins 74A, 76A.

With reference to Figure 6, it will be appreciated that pivotal points defined by pins 74A, 76A are vertically spaced to permit side arms 36, 38 to pivot from a substantially vertical to a substantially horizontal position. Accordingly, it will be appreciated that the ends of side arms 36, 38 are bevelled to permit pivotal rotation within channel 48.

With reference to Figure 2, to releaseably secure frame 24 in erected position there is provided horizontal

pin 88; segment 86 at its opposite end carries a vertically oriented pivotal joint 90 (similar to pivotal joint 46) which is pivotally attached by pin 92 to vertical locking segment 94. Vertical locking segment 94 is pivotally attached to side arm 34 by pin 96. It will be appreciated that pivotal joint 90 is identical in structure to pivotal joint 46 and therefore provides a channel 98 opening towards horizontal locking segment 86. Channel 98 receives end of horizontal locking segment 86 and is welded thereto.

Horizontal locking segment 86 and vertical locking segment 94 are locked in angular relationship of substantially 90 degrees with respect to one another by a diagonal locking segment 100 composed of subsegments 102, 104. Subsegments 102, 104 are connected one to the other by a channel-shaped locking bar 106. Locking bar 106 comprises a channel surmounting and receiving ends of subsegments 102, 104 and pivotally linked thereto by pins 110, 112. Subsegments 102, 104 are pivotally linked to locking segments 94, 86 by pins 108, 114 respectively. It will be appreciated that locking segments 94, 86 support the angular relationship between frame side arms 34, 38; diagonal locking segment 100 secures locking segments 94, 86 at an angular relationship to one another of substantially 90 degrees.

With reference to Figures 2, 7, 8 and 9, it will be seen that when an angularly upward pressure along a vector 124 is applied to locking bar 106, diagonal locking segment 100 is collapsed permitting horizontal locking segment 86 and vertical locking segment 94 to pivot to a substantially parallel position with respect to one another; simultaneously, vertical frame member 32 is released and

may collapse along curved vector 126 to a position substantially parallel with horizontal frame m mber 28. It will be appreciated that intermediate frame member 30 is only linked to frame 24 at aperture and pin 74, 74A; angular position of intermediate frame member 30 is secured by web of cover 26 extending between frame members 28, 30, 32 (best seen in Figure 14). With regard to Figure 8, horizontally collapsed side arms 34, 36, 38 may be pivotted at joints 46 along vectors 128 to fully collapse frame (best seen in Figure 9). It will be appreciated that cover 26 is secured to frame by loops 130 zoned to cover 26 and extending around frame members or by pins 132 extending through cover 26 and frame members (best shown in Figure 10), sufficiently that cover 26 substantially conforms to configuration of frame 24 when frame is either erected (Figure 2) or fully collapsed (Figure 9).

With reference to Figures 2A, 2B and 2C, it will be seen that seat 116 comprises downwardly oriented channels 118 spaced apart by and welded to support bars 120 which carry pivotally connected lateral support arms 190, 192. Support bars 120 carry an overlying seat cushion or board 122. Channels 118 are of dimensions suitable to frictionally surmount horizontal locking segments 86. Lateral support arms 190, 192 pivot in relation to support bars 120 by means of a pin 194 and at the opposite end carry downwardly oriented channels 196 of dimensions suitable to frictionally surmount horizontal side arms 34. With reference to Figures 2 and 2D, seat 22 comprising extended lateral support arms 190, 192 surmounting horizontal side arms 34 and channels 118 surmounting horizontal locking segments 86 is essential so as to substantially stabilize the lateral stability

of pivotally collapsible self-supporting frame 24 while erected.

With reference to Figures 10, 11, 12 and 13, a frame 24, cover 26 therefore and a system of flaps, screens and windows for cover 26 are shown in one embodiment preferably suitable as an outdoor portable shelter; for example, hunting blind. Front aperture 134 comprises a fine webbing or screen 136 sewn into aperture 134 in cover 26 constructed of at least two overlapping pieces of webbing 136, 136A to provide slits 138 which may be ideally spread apart by hand or pressure from the muzzel of a firearm. Inside front flap 140 releaseably overlies screen 136, 136A by closing zipper 142 communicating between flap 140 and circumference of aperture 134. Side aperture 142 comprises a fine webbing or screen 144, 144A sewn into aperture 142 in cover 26 constructed of at least two overlapping pieces of webbing 144, 144A to provide slit 146; inside side flap 148 overlies screen 144, 144A by closing zipper 150 communicating between flap 148 and circumference of aperture 142. It will be appreciated that flaps 140, 148 form a waterproof seal with cover 26; and that as many embodiments of apertures 134, 142 as necessary may be finished into cover. With reference to Figure 10, front door 152 may be rolled up by unzipping vertically oriented zippers 154, 154A and securing door 152 with ties 156, 156A (best shown in Figure 1). Door 152 may be unzipped to provide an open flap of controlled aperture by employing a vertically and horizontally oriented zipper 158.

As many embodiments of door 152 as necessary may be finished into cover 26; top waterproof flap 160

is shown in Figure 10, comprising inwardly opening flap 160 and zipper 162.

With reference to Figures 14 and 15, a frame 24, cover 26 therefore and a system of flaps, collars and zippers for cover 26 are shown in another embodiment preferably suitable as a portable shelter outdoors or indoors (for example, in an underground hydro vault) in effecting electrical or telephone field repairs particularly in the case of electrical components including integrated circuits or switches, fibre optics, cables, or digital equipment where the equipment must be worked upon in a protected environment free of dust, corrosive contaminants, rain or snow etcetera. Horizontally extending aperture 164 (best shown in Figure 15) for electrical cable 166 passing longitudinally through cover 26 comprises two sections of a horizontally extending zipper 168, 168A which may be opened to provide a cross-sectional horizontally extending slit 170 to receive longitudinally extending cable 166, and zipped closed behind cable 166 to enclose section 166A of cable to be worked on in cover 26. It will be appreciated that sliding pieces 169, 169A of zipper sections 168, 168A may be reciprocated to central clasp 172; sliding piece 169, 169A reciprocates towards central clasp 172 upon upper or lower strip of teeth and thereby passes over cable 166 once cable 166 is inserted in cross-sectional slit 170 proximate aperture 164. Sliding piece 169, 169A joins clasp 172 and closes slit 170 behind cable 166 by drawing upper and lower strips of teeth into interlocking position.

Enclosure 174 for a vertically extending pole 176 comprises a plurality of top 178 and side 180, 181

flaps extending outwardly from front of shelter 22 defined by vertical frame member 32. Top enclosure flap 178 carries a vertically extending collar 182 of sufficient circumference to extend around circumference of pole 176. Vertically extending edges of collar 182A and side flaps 180A, 181A are joined by a plurality of any suitable fasteners 184 to complete enclosure 174, thereby providing a protected environment around electrical components carried by pole 176 proximate its base.

As many changes can be made to the embodiment of the invention without departing from the scope of the invention, it is intended that all material be considered illustrative of the invention and not in a limiting sense.

7-1

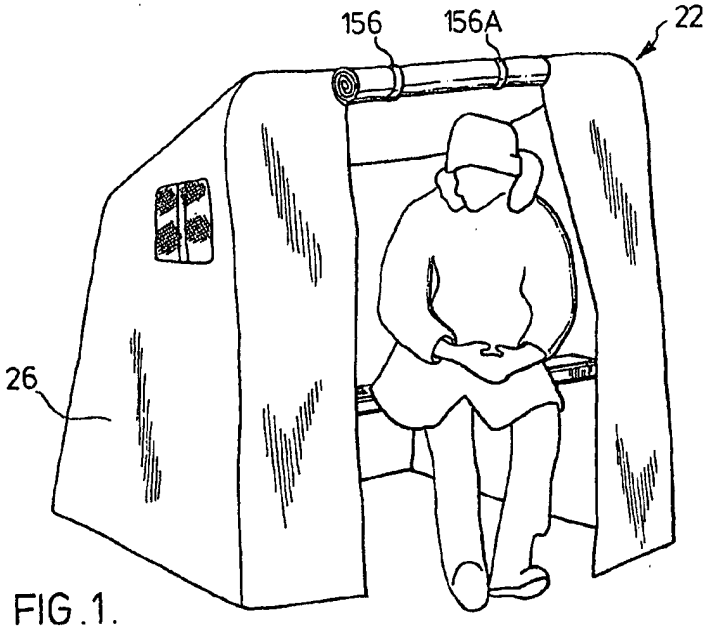
156
156A
22
26

FIG.1.

FIG.2.

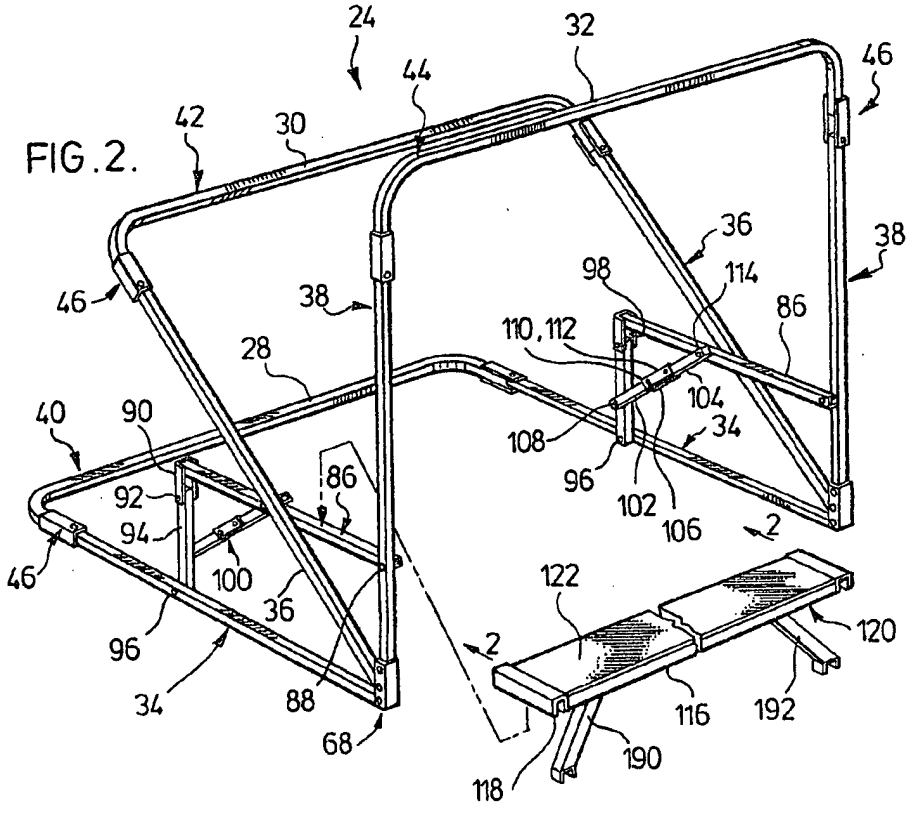
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FIG. 9.

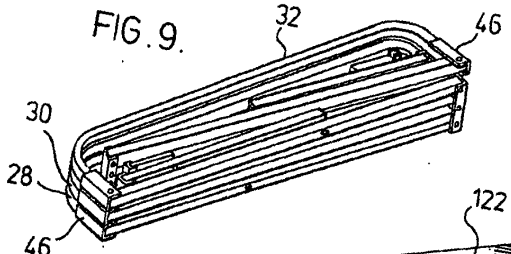


FIG. 2A.

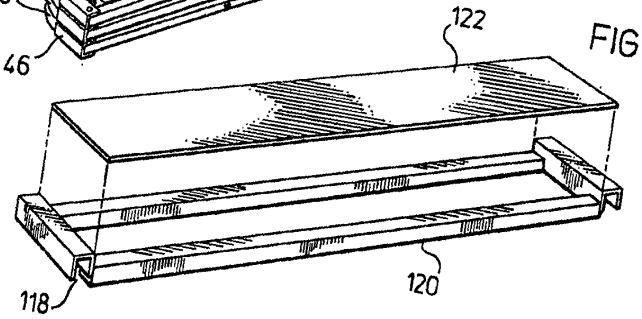


FIG. 10.

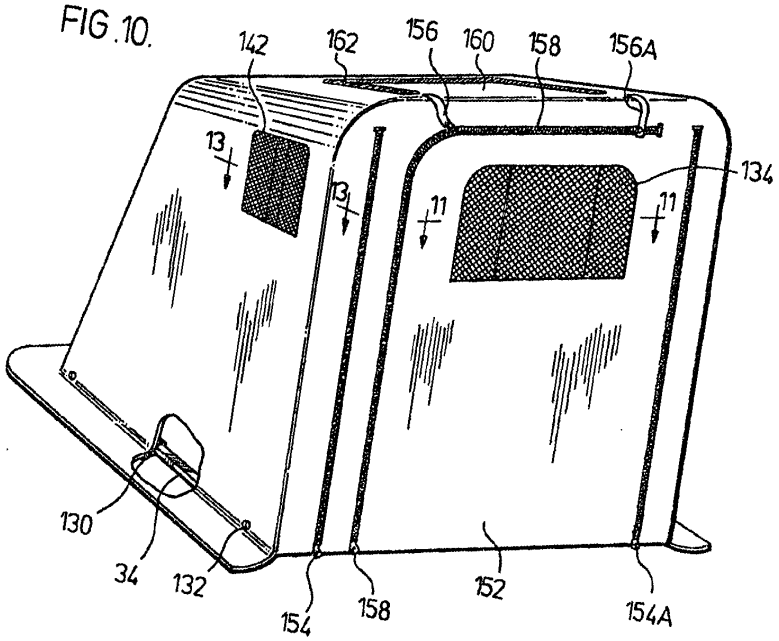


FIG. 2B.

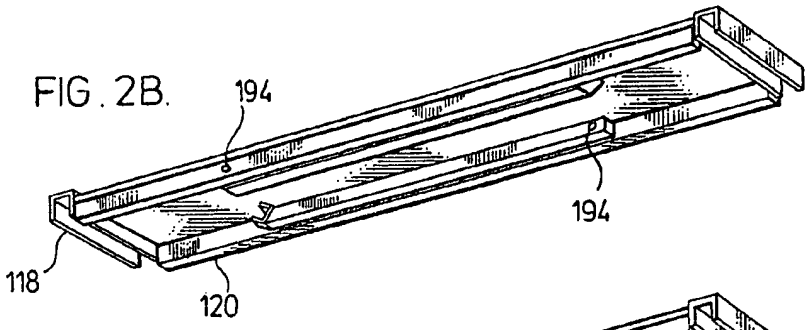


FIG. 2C.

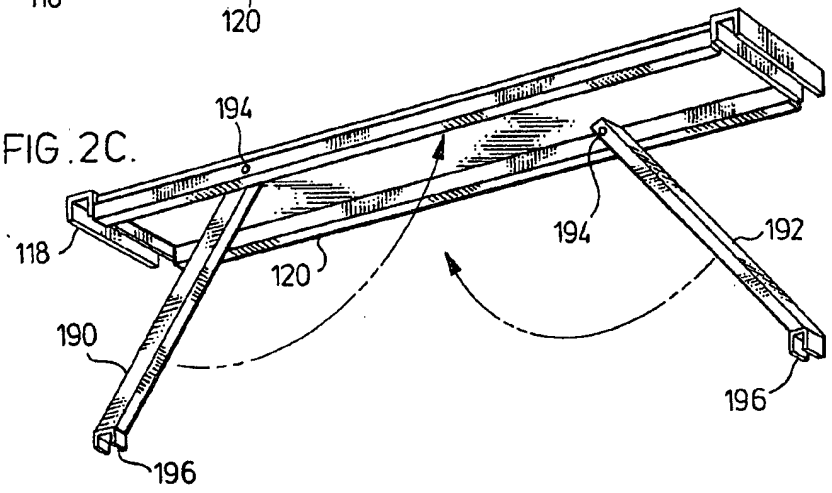
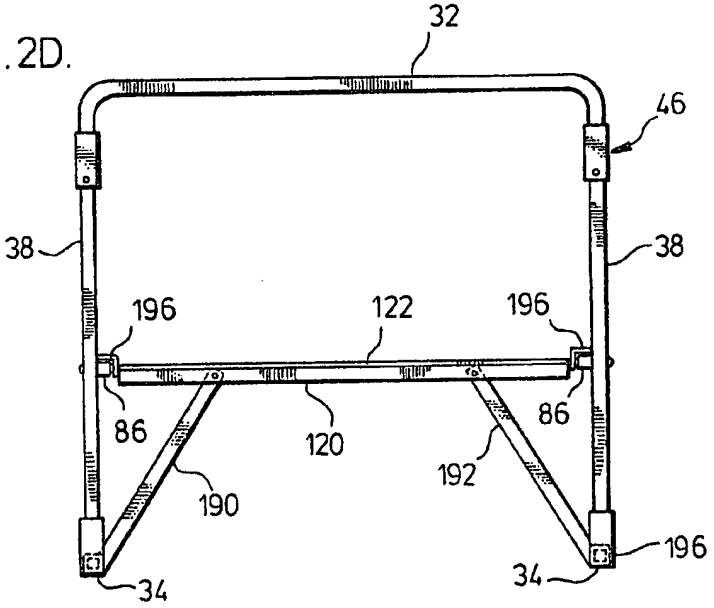


FIG. 2D.



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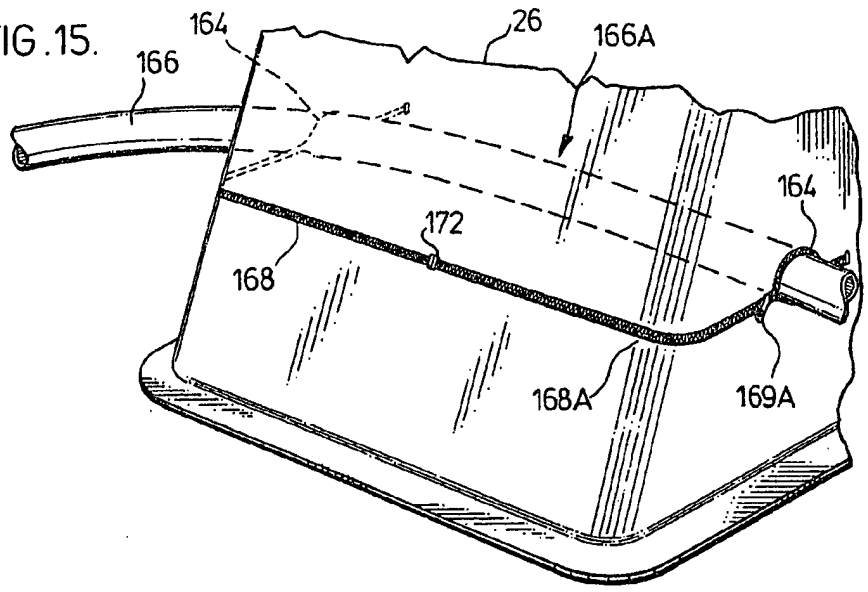
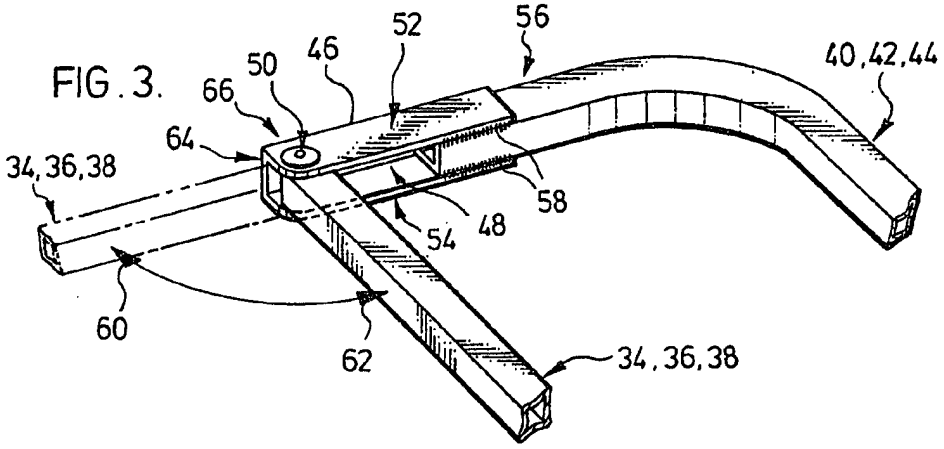


FIG. 3.



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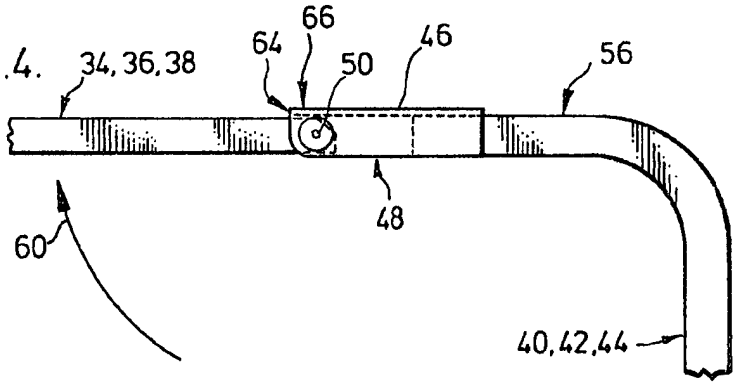


FIG. 5.

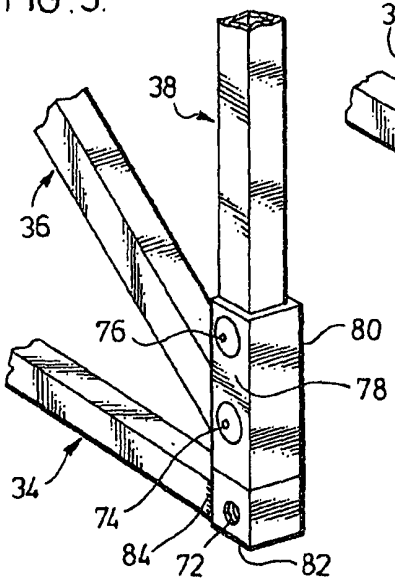


FIG. 6.

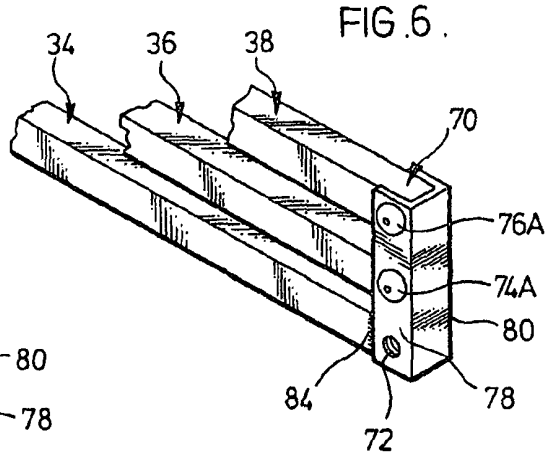


FIG. 12

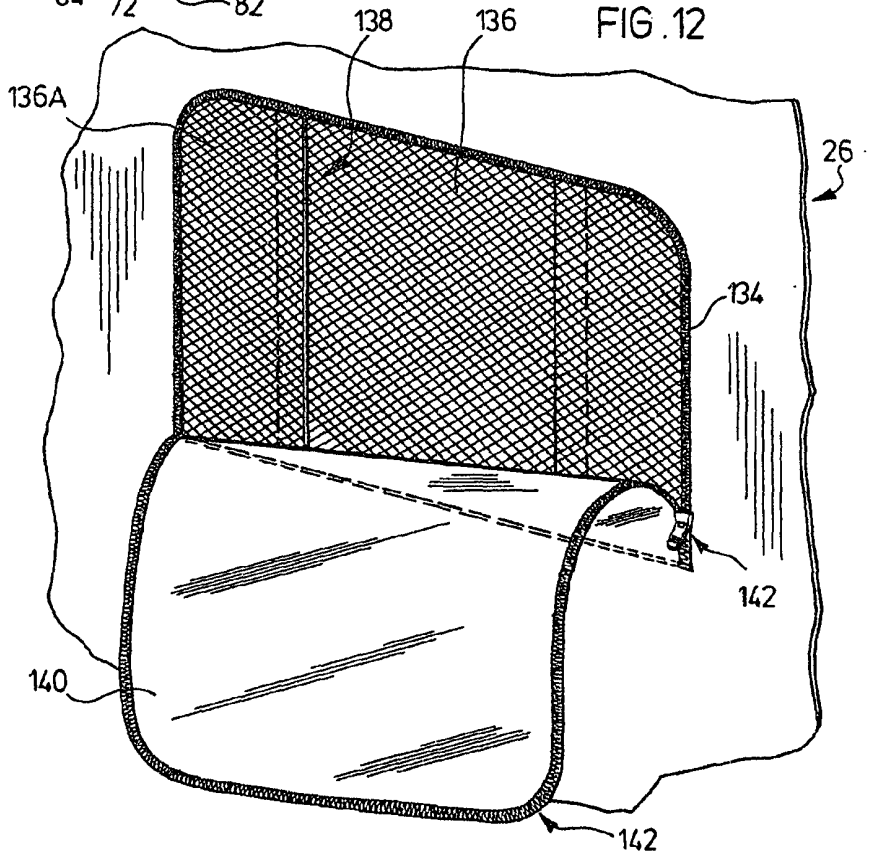


FIG. 7.

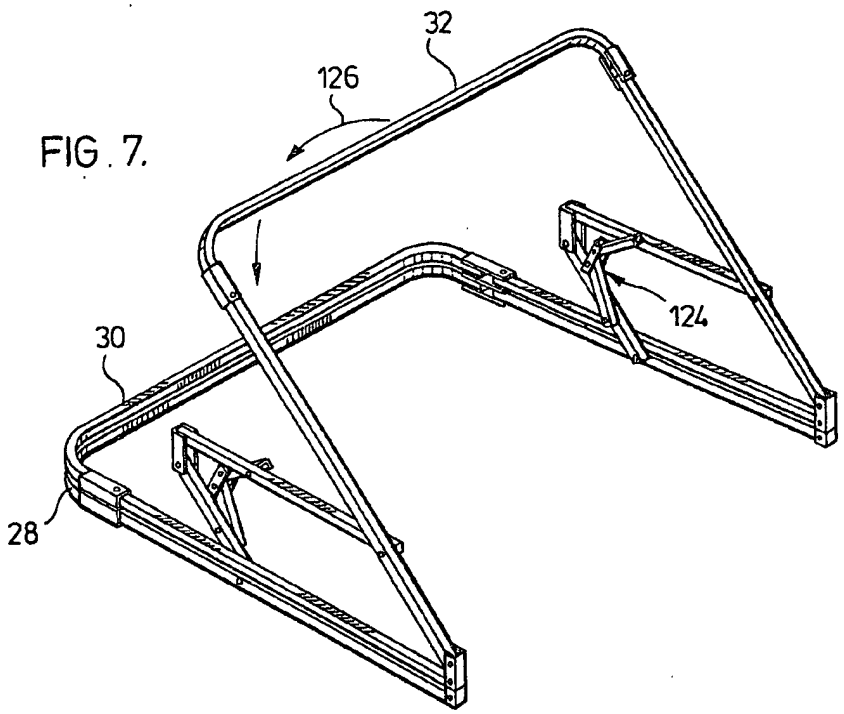


FIG. 8.

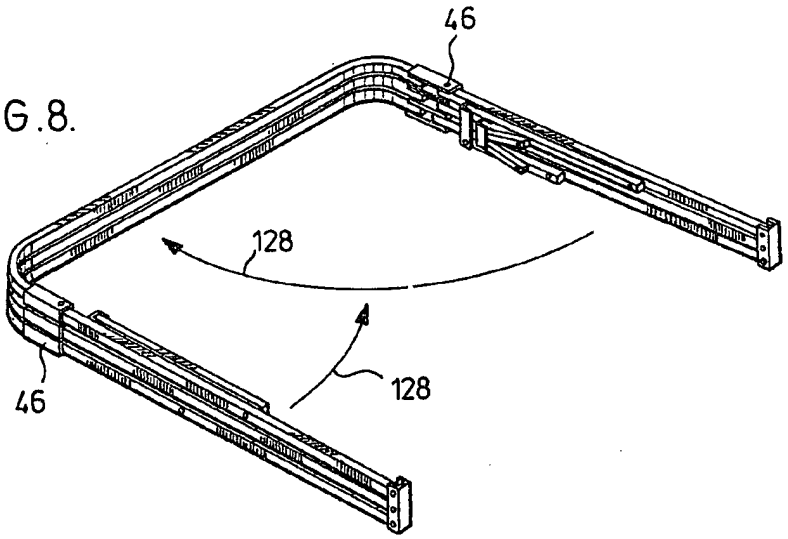


FIG. 11.

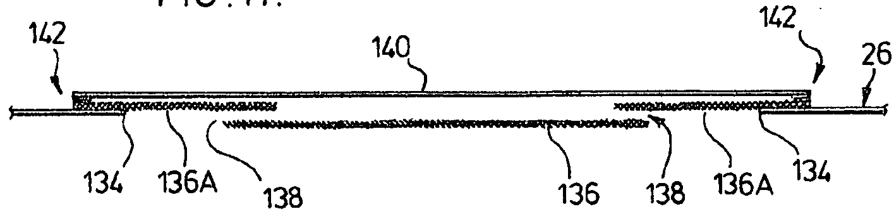


FIG. 13.

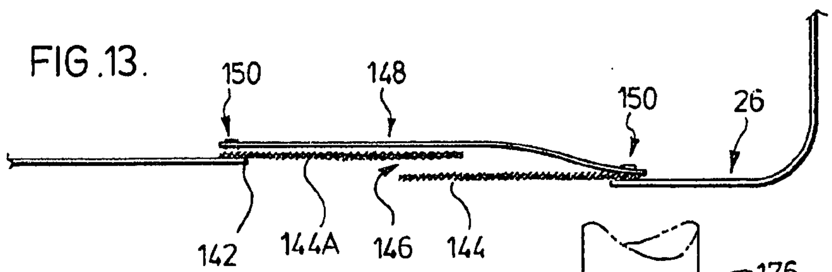
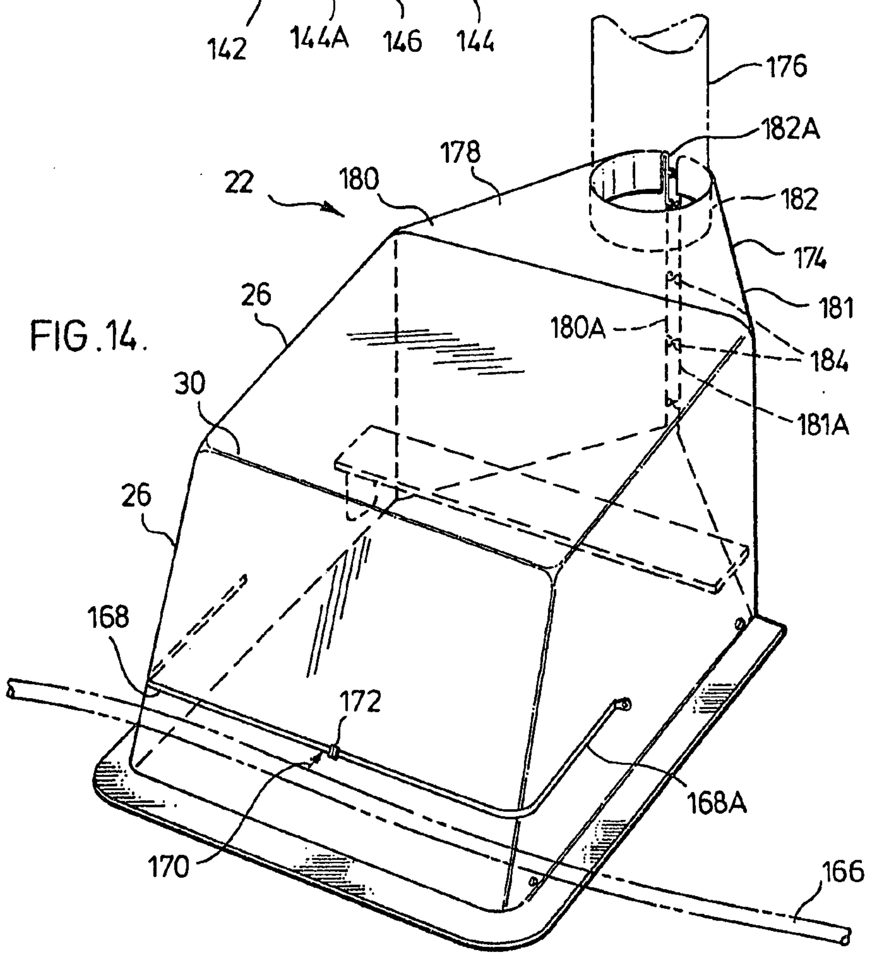


FIG. 14.



Ivan M. Magill

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE AS FOLLOWS:

1. A portable shelter or tent enclosure constructed of a pivotally collapsible self-supporting frame supporting a fabric shelter comprising a pivotally collapsible self-supporting frame having at least three substantially U-shaped frame members, each frame member having a pair of parallel side arms spaced from each other at the same end by a top arm and pivotally linked to the top arm, the parallel side arms supportable in parallel spaced relationship by a removeably secureable horizontal seat substantially extending between two of the spaced parallel side arms and carrying lateral support arms for extending between the horizontal seat and parallel side arms vertically spaced below the seat, each side arm at the end remote the top arm vertically spaced and pivotally linked with respect to the at least three adjacent side arms sufficient to permit the at least three substantially U-shaped frame members to be angularly spaceable to provide an erected frame defining a volume, to be pivotally collapsible until each of the at least three substantially U-shaped frame members are substantially parallel, and to permit the parallel side arms to be pivotally collapsible extending to a position parallel and adjacent to the at least three top arms; a canvas or fabric cover surrounding and secured to the frame, conformable to the erected or collapsed shape of the frame and having a plurality of apertures and closures comprising windows, screens, flaps, slits or collars suitable to directly enclose or surround therewith a body or object.

2. A portable shelter or tent enclosure constructed of a pivotally collapsible self-supporting frame supporting a fabric shelter comprising a pivotally collapsible self-supporting frame, the shape of the frame when pivotally erected, defined by at least three substantially U-shaped frame members, each frame member having a pair of parallel side arms spaced from each other at the same end by a top arm sufficient to form a substantially U-shape, the top arm at either end carrying a channel in which the same end of both side arms are pivotally linked sufficient to permit each side arm to be positioned at a substantially right angle to the top arm and to pivot to a position substantially parallel and adjacent to the top arm; the at least three substantially U-shaped frame members pivotally linked so as to define at least three planes, the at least three side arms spaced on each side of the at least three top arms, at their ends remote the top arm pivotally linked in at least two parallel spaced apart vertical channels, each channel providing at least three vertically spaced pivot points in which the end portions of the at least three side arms are vertically spaced and pivotally linked to each vertical channel, sufficient to permit the at least three substantially U-shaped frame members defining at least three planes to be spaceable from each other extending pivotally from common pivot points provided by the at least two parallel spaced apart vertical channels so as to provide a frame when pivotally erected having three frame members angularly spaced from a common line of pivot, the angularly spaced frame members comprising a first horizontal frame member, a third vertical frame

member, and a second intermediate frame member angularly spaced between the first and third frame member; the at least three angularly spaced frame members when pivotally erected, releaseably locked in spaced relationship by a releaseable locking means comprising a horizontal locking segment pivotally attached to the vertical side arm of the third vertical frame member at a point spaced from the ends thereof, a vertical locking segment pivotally attached to the horizontal side arm of the first horizontal frame member at a point spaced from the ends thereof, the horizontal locking segment carrying a vertically extending channel in which the end of the vertical locking segment is pivotally linked, at substantially a right angle; a diagonal segment, composed of two pivotally attached subsegments connected one to the other by an intermediate channel-shaped locking bar providing at least two spaced pivot points, extending downwardly at substantially 45 degrees, between the vertical and horizontal locking segments so as to lock the position of the vertical locking segment at a substantially right angle to the horizontal locking segment, the said releaseable locking means being carried by the parallel side arms spaced on both sides of the frame; and the frame further supported in spaced relationship by a removeably secureable horizontal seat extending between and surmounting the horizontal locking segments, spaced on both sides of the frame, the seat carrying two lateral support arms each for extending between the seat and the side arms of the horizontal frame member so as to substantially stabilize the lateral stability of the frame; a canvas or fabric cover surrounding and secured to the frame, conformable

to the erected or collapsible shape of the frame, having a plurality of flaps, screens and windows suitable for camouflaging, comprising a front flap door spaced between the arms of the third vertical frame member, a plurality of apertures comprising windows, screens or flaps on the side, back or top of the hunting blind spaced between the angularly spaced side or top arms of the frame members, the screens comprising a fine webbing sewn into an aperture in the cover and constructed of at least two overlapping pieces of webbing to provide slits which may be spread apart by hand pressure or pressure from the muzzel of a firearm, fabric flaps overlying the screens suitable to make the aperture waterproof and which are suitably rolled up to expose the screens, the flaps secureable in an opened or closed position by means of a zipper connected to the cover, or by means of fabric ties; a cover, when used in combination with the frame, having a plurality of zippers, flaps, collars and the like sufficient that the portable tent enclosure may be erected so as to directly enclose or surround an object comprising a substantially horizontally placed zipper extending around the sides and back of the shelter so as to receive an enclosed cable passing longitudinally through the portable tent enclosure, a plurality of flaps extending from the top and sides of the portable tent enclosure proximate the third vertical frame member the top flap providing at least one vertically extending collar sufficient to surround at least one vertically extending pole proximate its base and thereby form an enclosure about a pole; an erected shelter which may be collapsed to a portable position by releaseable locking means, pivotally placing the third

and second frame members in a horizontal position parallel the first horizontal frame member, and pivoting the side arms of each frame member inwardly to a position substantially parallel and adjacent to the corresponding top arm of each frame member, the canvas or fabric cover attached to the frame members substantially conforming to the dimensions of the collapsed frame; a cover secured to the frame by means of loops passing around the frame members or, by means of bolts or pins passing through the cover and secured to the frame member.

3. The pivotally collapsible self-supporting frame of Claims 1 and 2, wherein the frame is constructed of aluminum.

4. The portable shelter of Claim 1, wherein the shape of the pivotally collapsible self-supporting frame when pivotally erected, is defined by at least three substantially U-shaped frame members, wherein each substantially U-shaped frame member has a pair of parallel side arms spaced from each other at the same end by a top arm comprising the top arm at either end carrying a channel in which the same end of both side arms are pivotally linked sufficient to permit each side arm to be positioned at a substantially right angle to the top arm and to be pivotable to a position substantially parallel and adjacent to the top arm.

5. The portable shelter of Claim 1, wherein the at least three substantially U-shaped frame members are pivotally linked with respect to one another so as to define

at least three planes, comprising the at least three side arms spaced on each side of the at least three top arms, at their ends remote the top arm pivotally linked in at least two parallel spaced apart vertical channels, each channel providing at least three vertically spaced pivot points in which the end portions of the at least three side arms are vertically spaced and pivotally linked to each vertical channel sufficient to permit the at least three substantially U-shaped frame members defining at least three planes to be spaceable from each other extending pivotally from common pivot points provided by the at least two parallel spaced apart vertical channels so as to provide a frame when pivotally erected having three frame members angularly spaced from a common line of pivot, the angularly spaced frame members comprising a first horizontal frame member, a third vertical frame member, and a second intermediate frame member angularly spaced between the first and third frame member.

6. The portable shelter of Claim 1, wherein the at least three angularly spaced frame members when pivotally erected provide a first horizontal frame member, and a third vertical frame member, releaseably locked in spaced relationship by a releaseable locking means comprising a horizontal locking segment pivotally attached to the vertical side arm of the third vertical frame member at a point spaced from the ends thereof, a vertical locking segment pivotally attached to the horizontal side arm of the first horizontal frame member at a point spaced from the ends thereof, the horizontal locking segment carrying

a vertically extending channel in which the end of the vertical locking segment is pivotally linked, at substantially a right angle; a diagonal locking segment, composed of two pivotally attached subsegments pivotally linked one to the other by an intermediate channel-shaped locking bar providing at least two spaced pivot points, extending downwardly at substantially 45 degrees, between the vertical and horizontal locking segment so as to lock the position of the vertical locking segment at a substantially right angle to the horizontal locking segment, the said releaseable locking means being carried by the parallel side arms spaced on both sides of the frame.

7. The portable shelter of Claim 6, wherein the diagonal locking segment is collapsible sufficient to permit the vertical locking segment and a horizontal locking segment to pivot from a substantially right angle to a substantially parallel position one to the other.

8. The portable shelter of Claim 1, comprising a seat extending horizontally between and surmounting the at least two horizontal locking segments spaced on both sides of the frame, the seat carrying two lateral support arms each for extending between the seat and the side member so as to substantially stabilize the lateral stability of the frame.

9. The portable shelter of Claim 1, wherein a canvas or fabric cover surrounding and secured to the frame and conformable to the erected or collapsed shape of the frame

suitable for use as a portable hunting blind or the like is provided having a plurality of flaps, screens and windows suitable for camouflaging, comprising a front flap door spaced between the arms of the third vertical frame member, a plurality of apertures comprising windows, screens or flaps on the side, back or top of the hunting blind spaced between the angularly spaced side or top arms of the frame members; screens comprising a fine webbing sewn into an aperture in the cover and constructed of at least two overlapping pieces of webbing to provide slits which may be ideally spread apart by hand pressure or pressure from the muzzel of a firearm, fabric flaps overlying the screens suitable to make the aperture waterproof and which are suitably rolled up to expose the screens.

10. The portable shelter of Claim 9, wherein the flaps are secured in an opened or closed position by means of a zipper connected to the cover.

11. The portable shelter of Claim 9, wherein the flaps are secured in an opened or closed position by means of fabric ties.

12. The portable shelter of Claim 1, wherein a canvas or fabric cover surrounding and secured to the frame and conformable to the erected or collapsed shape of the frame suitable for use in effecting electrical or telephone field repairs, particularly in the case of electrical components including integrated circuits or switches, fibre optics, cables, or digital equipment where the equipment must be

worked upon in a protected environment in order to be kept clean is provided, having a plurality of zippers, flaps, collars and like sufficient that the portable tent enclosure may be erected so as to directly enclose or surround a body or object comprising a substantially horizontally placed zipper extending around the sides and back of the shelter so as to receive and enclose a cable passing longitudinally through the portable tent enclosure; and, further comprising a plurality of flaps extending from the top and sides of the portable tent enclosure proximate the third vertical frame member, the top flap providing at least one vertically extending collar sufficient to surround at least one vertically extending pole proximate its base and thereby form an enclosure about a pole, thereby providing a controlled environment that will not expose a body or object to dust, corrosive contaminants, rain or snow etcetera.

13. The portable shelter of Claim 1, wherein the erected shelter may be collapsed to a portable position by releaseable locking means comprising the steps of removing the seat substantially extending between spaced parallel side arms comprising a frame member, pivotally placing first, second, and third frame members in a substantially horizontal and parallel position, and pivoting the side arms of each such frame member inwardly to a position substantially parallel and adjacent to the corresponding top arm of each frame member.

14. A cover for a collapsible shelter, portable when collapsed, the collapsible shelter having a frame for supporting

the cover, the frame suitable when erected for supporting the cover so as to define a tent enclosure having at least two parallel side walls spaced from each other at the same ends by a rear wall, a top wall and a front wall; the cover comprising at least one opening directed across one first wall and partially across two other walls parallel to one another and spaced from each other at the same ends by the one first wall, the said at least one opening capable of being completely closed by at least one pair of zippers each zipper of the at least one pair of zippers being disengageable so as to completely open the at least one opening and being closeable so as to completely close the at least one opening enclosing an article traversing the at least one opening at at least one aperture.

15. A cover for a collapsible shelter, portable when collapsed, the collapsible shelter having a frame for supporting the cover, the frame suitable when erected for supporting the cover so as to define a tent enclosure having at least two parallel side walls spaced from each other at the same ends by a rear wall, a top wall and a front wall; the cover comprising at least one opening directed across one first wall and partially across two other walls parallel to one another and spaced from each other at the same ends by the one first wall, the said at least one opening capable of being completely closed by at least one pair of zippers, the clasp joining the two flexible strips of the zipper together at one end of the zipper of each zipper of the at least one pair of zippers being disengageable so as to separate the two halves of each zipper of the at least

one pair of zippers and completely open the at least one opening and being closeable so as to enclose an article traversing the at least one opening at at least one aperture.

16. A cover for a collapsible shelter, portable when collapsed, a collapsible shelter having a frame for supporting the cover, the frame suitable when erected for supporting the cover so as to define a tent enclosure having at least two parallel side walls spaced from each other at the same ends by a rear wall, a top wall and a front wall; the cover comprising at least one opening directed across one first wall and partially across two other walls parallel to one another and spaced from each other at the same ends by the one first wall, the said at least one opening capable of being completely closed by at least one pair of zippers each zipper of the at least one pair of zippers being disengageable so as to completely open the at least one opening and being closeable so as to completely close the at least one opening enclosing an article traversing the at least one opening at at least two apertures.

17. A cover for a collapsible shelter, portable when collapsed, the collapsible shelter having a frame for supporting the cover, the frame suitable when erected for supporting the cover so as to define a tent enclosure having at least two parallel side walls spaced from each other at the same ends by a rear wall, a top wall and a front wall; the cover comprising at least one opening directed across one first wall and partially across two other walls parallel to one another and spaced from each other at the same ends by

the one first wall, the said at least one opening capable of being completely closed by at least one pair of zippers, the clasp joining the two flexible strips of the zipper together at one end of the zipper of each zipper of the at least one pair of zippers being disengageable so as to separate the two halves of each zipper of the at least one pair of zippers and completely open the at least one opening and being closeable so as to enclose an article traversing the at least one opening at at least two apertures.

18. A cover for a collapsible shelter, portable when collapsed, the collapsible shelter having a frame for supporting the cover, the frame suitable when erected for supporting the cover so as to define a tent enclosure having at least two parallel side walls spaced from each other at the same ends by a rear wall, a top wall and a front wall; the cover comprising at least one opening directed across one first wall and partially across two other walls parallel to one another and spaced from each other at the same ends by the one first wall, the said at least one opening capable of being completely closed by one zipper, the zipper being disengageable so as to completely open the at least one opening and being closeable so as to completely close the at least one opening enclosing an article traversing the at least one opening at at least one aperture.

19. A cover for a collapsible shelter, portable when collapsed, the collapsible shelter having a frame for supporting the cover, the frame suitable when erected for supporting the cover so as to define a tent enclosure having at least

two parallel side walls spaced from each other at the same ends by a rear wall, a top wall and a front wall; the cover comprising at least one opening directed across one first wall and partially across two other walls parallel to one another and spaced from each other at the same ends by the one first wall, the said at least one opening capable of being completely closed by one zipper, one flexible strip of the zipper being completely disengageable from the clasp fixed to the opposite flexible strip so as to separate the two halves of the one zipper and completely open the at least one opening and being closeable so as to enclose an article traversing the at least one opening at at least one aperture.

20. A cover for a collapsible shelter, portable when collapsed, the collapsible shelter having a frame for supporting the cover, the frame suitable when erected for supporting the cover so as to define a tent enclosure having at least two parallel side walls spaced from each other at the same ends by a rear wall, a top wall and a front wall; the cover comprising at least one opening directed across one first wall and partially across two other walls parallel to one another and spaced from each other at the same ends by the one first wall, the said at least one opening capable of being completely closed by one zipper, the zipper being disengageable so as to completely open the at least one opening and being closeable so as to completely close the at least one opening enclosing an article traversing the at least one opening at at least two apertures.

21. A cover for a collapsible shelter, portable when collapsed, the collapsible shelter having a frame for supporting the cover, the frame suitable when erected for supporting the cover so as to define a tent enclosure having at least two parallel side walls spaced from each other at the same ends by a rear wall, a top wall and a front wall; the cover comprising at least one opening directed across one first wall and partially across two other walls parallel to one another and spaced from each other at the same ends by the one first wall, the said at least one opening capable of being completely closed by one zipper, one flexible strip of the zipper being completely disengageable from the clasp fixed to the opposite flexible strip so as to separate the two halves of the one zipper and completely open the at least one opening and being closeable so as to enclose an article traversing the at least one opening at at least two apertures, one aperture being the lateral limit of the at least one opening and the clasp fixed to one flexible strip when the opposite flexible strip is engaged therewith, a second aperture between the lateral limit of closure of the one zipper and the lateral limit of the at least one opening remote the fixed clasp.

22. The portable shelter of Claim 15, wherein the clasps for joining the two flexible strips at one end of each zipper of the at least one pair of zippers are positioned centrally of the one side across which the opening extends and the sliding clips for closure of each zipper slide to close the at least one opening by closing the zippers moving to the lateral limits of the at least one opening

on both sides from the centrally positioned clasps towards the openings extending partially across the two other walls parallel to one another.

23. The portable shelter of Claim 17, wherein the clasps for joining the two flexible strips at one end of each zipper of the at least one pair of zippers are positioned centrally of the one side across which the opening extends and the sliding clips for closure of each zipper slide to close the at least one opening by closing the zippers moving to the lateral limits of the at least one opening on both sides from the centrally positioned clasps towards the openings extending partially across the two other walls parallel to one another.

24. A cover for a collapsible shelter, portable when collapsed, the collapsible shelter having a frame for supporting the cover, the frame suitable when erected for supporting the cover so as to define a tent enclosure having at least two parallel side walls spaced from each other at the same ends by a rear wall, a top wall and a front wall; the cover comprising at least one opening directed across at least one wall, the said at least one opening capable of being closed by one pair of zippers, each clasp joining the two flexible strips of each zipper of the pair of zippers centrally disposed in relation to the lateral limits of the at least one opening, each clasp being completely disengageable so as to separate the two halves of each zipper of the one pair of zippers and completely open the at least one opening, the pair of zippers closing laterally in both

directions from the two centrally disposed clasps to proximate the lateral limits of the at least one opening on both sides of the two centrally disposed clasps to provide two openings spaced from one another in the at least one opening when the said at least one opening is closed by the said pair of zippers, each of the said two spaced openings positioned intermediate the limit of closure of each zipper and the lateral limit of the at least one opening on both ends of the at least one opening to permit the free ends of at least two cables to be passed through each of the two openings and joined together to form one cable; whereby the pair of zippers may be completely opened and the two centrally disposed clasps disengaged to provide the at least one opening to permit removal of the entire cable from the tent enclosure.

25. The portable shelter of Claim 24, wherein the cover having at least one opening comprises, the at least one opening directed across one first wall and at least partially across one other wall contiguous with one side of the first wall.

26. The portable shelter of Claim 24, wherein the cover having at least one opening comprises, the at least one opening directed across one first wall and at least partially across two other walls contiguous with two sides of the first wall.

27. The portable shelter of Claim 24, wherein the cover having at least one opening comprises, the at least

one opening directed across one first wall and at least partially across two other walls parallel to one another and spaced from each other at the same ends by the one first wall.

28. A portable shelter or tent enclosure comprising a pivotally collapsible self-supporting frame for supporting a fabric cover comprising a pivotally collapsible self-supporting frame having at least three substantially U-shaped frame members, each substantially U-shaped frame member having a pair of parallel side arms spaced from each other at the same end by a top arm, the three pairs of parallel side arms each at the end remote the top arm linked to about a common point, at least two of the three pairs of parallel side arms each at the end remote the top arm pivotally linked to the about common point sufficient to permit at least two of the three substantially U-shaped frame members to be pivotally spaceable so as to permit the three substantially U-shaped frame members to be angularly spaced apart one from the other, at least two of the three substantially U-shaped frame members braceable when angularly spaced one from the other by a pair of releaseable locking means each one comprising a horizontal locking segment pivotally attached at one end to an intermediate point along one side arm, a second locking segment pivotally attached at one end to an intermediate point along a side arm angularly spaceable from the other side arm, each of the two locking segments at the end opposite that which is linked to the side arms pivotally linked one to the other, the horizontal

locking segment and second locking segment braceable in an angularly spaced position so as to form a parallelogram laterally braced when the frame is erected by a diagonal locking segment extending angularly downwardly between the horizontal locking segment and the second locking segment, the diagonal locking segment composed of two subsegments each one attached pivotally at one end to one locking segment and at the other end pivotally connected one to the other, and; the pair of parallel side arms of each of at least two of the three frame members laterally braced apart by a removeably secureable horizontal frame member extending between each horizontal locking segment of the pair of releaseable locking means, the removeably secureable horizontal frame member carrying two lateral support arms each one connected at one end to an intermediate point along the removeably secureable horizontal frame member and extending angularly downwardly to the side each one to surmount at the opposite end one of the two side arms of a substantially U-shaped frame member.

29. The pivotally collapsible self-supporting frame of claim 28, wherein the frame is constructed of aluminium.

30. The portable shelter of Claim 28, wherein the shape of the pivotally collapsible self-supporting frame when pivotally erected, is defined by at least three substantially U-shaped frame members, wherein each substantially U-shaped frame member has a pair of parallel side arms spaced from each other at the same end by a top arm comprising the

top arm at either end carrying a channel in which one end of each side arm is pivotally linked sufficient to permit each side arm to be positioned at a substantially right angle to the top arm and to be pivotable to a position substantially parallel and adjacent to the top arm.

31. The portable shelter of Claim 28, wherein the at least three angularly spaced frame members when pivotally erected provide a first horizontal frame member, and a third vertical frame member, releaseably locked in spaced relationship by a releaseable locking means comprising a horizontal locking segment pivotally attached to the vertical side arm of the third vertical frame member at a point spaced from the ends thereof, a vertical locking segment pivotally attached to the horizontal side arm of the first horizontal frame member at a point spaced from the ends thereof, the horizontal locking segment carrying a vertically extending channel in which the end of the vertical locking segment is pivotally linked, at substantially a right angle when the frame is erected; a diagonal locking segment, composed of two subsegments each at one end attached pivotally to one locking segment and at the other end connected one to the other by a downwardly opening channel-shaped locking bar providing at least two spaced pivot points, the diagonal locking segment extending angularly downwardly when the frame is erected between the horizontal and vertical locking segments, rigidifies the releaseable locking means so as to form a laterally braced parallelogram, the said releaseable locking means being carried by the parallel side arms spaced on both sides of the frame.

32. The portable shelter of Claim 31, wherein the diagonal locking segment is collapsible sufficient to permit the vertical locking segment and the horizontal locking segment comprising a laterally braced parallelogram to collapse to a substantially parallel position one to the other.

33. The portable shelter of Claim 28, comprising a seat extending horizontally between and surmounting the at least two horizontal locking segments spaced on both sides of the frame, the seat carrying two lateral support arms each one connected at one end to an intermediate point along the seat for extending angularly downwardly to the side between the seat and the side member so as to substantially stabilize the lateral stability of the frame.

34. A portable shelter or tent enclosure comprising a pivotally collapsible self-supporting frame for supporting a fabric cover, the structure of the frame when pivotally erected defined by at least three substantially U-shaped frame members, each frame member having a pair of parallel side arms spaced from each other at the same end by a top arm sufficient to form a substantially U-shape, the top arm at either end carrying a channel in which one end of each side arm is pivotally linked sufficient to permit each side arm to be positioned at a substantially right angle to the top arm and to pivot to a position substantially parallel and adjacent to the top arm; two of the at least three substantially U-shaped frame members pivotally linked

so as to define at least three planes, two of the at least three side arms spaced on each side of the at least three top arms, at their ends remote the top arm pivotally linked in at least two parallel spaced apart vertical channels, each channel providing at least two vertically spaced pivot points in which the end portions of at least two of the three side arms are vertically spaced and pivotally linked to each vertical channel, sufficient to permit at least two of the three substantially U-shaped frame members defining at least three planes to be spaceable from each other extending pivotally from pivot points provided by the at least two parallel spaced apart vertical channels so as to provide a frame when pivotally erected having three frame members angularly spaced from about a common line of pivot, the angularly spaced frame members comprising a first horizontal frame member, a third vertical frame member, and a second intermediate frame member angularly spaced between the first and third frame member; the first horizontal frame member and the third vertical member of the at least three angularly spaced frame members when pivotally erected, releaseably locked in spaced relationship by a releaseable locking means comprising a horizontal locking segment pivotally attached to the vertical side arm of the third vertical frame member at a point spaced from the end thereof, a vertical locking segment pivotally attached to the horizontal side arm of the first horizontal frame member at a point spaced from the ends thereof, the horizontal locking segment carrying a vertically extending channel in which the end of the vertical locking segment is pivotally linked, at substantially a right angle when the frame is erected;

a diagonal segment, composed of two subsegments each at one end attached pivotally to one locking segment and at the other end connected one to the other by a downwardly opening channel-shaped locking bar providing at least two spaced pivot points, the diagonal locking segment extending angularly downwardly when the frame is erected, between the horizontal and vertical locking segments, rigidifies the releaseable locking means so as to form a laterally braced parallelogram, the said releaseable locking means being carried by the parallel side arms spaced on both sides of the frame; and, a removeable seat extending between and surmounting the two horizontal locking segments spaced on both sides of the frame when the frame is erected, the seat carrying two lateral support arms each one connected at one end to an intermediate point along the seat and extending angularly downwardly to the side each one to surmount at the opposite end one of the two side arms of the horizontal frame member spaced on both sides of the frame, whereby when the seat is connected to the erected frame, the seat provides a brace giving the structure lateral stability.